

# RESERVE COPY

## PATENT SPECIFICATION

512.024



Convention Dates  
(Germany)

Feb. 22, 1937:  
May 5, 1937:

Corresponding Applications  
in United Kingdom

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No. 5629/38 } dated Feb. 22, 1938.

(One Complete Specification Left under Section 91 (2) of the Patents and Designs Acts, 1907 to 1938.)

Specification Accepted: Aug. 28, 1939.

### COMPLETE SPECIFICATION

#### Improvements in or relating to Heaters, more particularly for Use with Cans or Tins containing Preserved Food

I, ANTON FEJES, of 3, Lindwurmstrasse, München, Germany, of no nationality, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The invention relates to heaters containing a solidified fuel, adapted to be inserted into a recess of the top or bottom of a preserved food can or tin.

Known heaters of this kind have the disadvantage that they occupy too much space, whereby the useful space of the can or tin to be heated is unnecessarily reduced. Other known heater constructions, which are free from this disadvantage, are structurally complicated and therefore difficult to manufacture, moreover, they are usually open on one side rendering the fuel stored therein liable to atmospheric and other influences which reduces the life of the heater.

According to the invention, the heating device for preserved food or like cans or tins comprises a solidified fuel container in the form of a flat box with an airtight lid soldered on or attached by seaming, said box fitting in a corresponding shallow depression in one end of the can or tin after the manner of a push-in lid and being secured to a metal ring having inwardly projecting tongues which can be bent outwardly in order to form feet for supporting the heating device.

The flat form of the fuel container has the advantage of taking up only a very small space whilst, when the heater is used, a strong flame is formed on account of the large fuel surface available for heating. The large flame produced enables the contents of the can or tin to be heated quickly and is not liable to be blown out by wind. The airtight closure of the fuel container enables the container to be stored for a considerable period of time without loss or deterioration of the

fuel. In addition, the costs of manufacture are small owing to the comparatively small quantity of material required and the number of operations necessary for making the container. The improved heater constitutes an independent unit easily separable from the can or tin. It may be used also for other purposes and can be easily stored. An important advantage of the improved heater is the fact that it may be used in various positions according to need, as the fuel mass is firmly held in the container. The fuel container may, for instance, be jammed after the manner of a friction lid into a suitable recess of the bottom of the can or tin, the flame then burning downwards. The fuel container may, on the other hand, be placed upon a suitable support and at a suitable distance from the tin or can, the flame then burning upwards from the surface of the fuel.

Where the lid of the fuel container is formed of an easily combustible but airtight material, it is only necessary to light the combustible lid to start the heater burning. Provision of a thin flexible lid on the fuel also renders the use of tools for opening the same unnecessary.

In most cases the can or tin to be heated should, on using the heater, occupy a position a suitable distance above the heater to enable air of combustion to have access to the fuel. For this purpose, the fuel container of the heater is provided with a metal ring firmly fixed thereto and provided with inwardly directed projections or tongues. This metal ring is preferably attached to the container by spinning or rolling the upper edge of the container over the ring. The spun-over or rolled-over portion of the container may be simultaneously used for holding the closure lid of the container. When using the heater, the tongues or projections of the metal ring are bent upwards and used as supports for the preserved food tin or

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can or other vessel. Tongues or projections of the metal ring may also be bent downwards and used for supporting the fuel container after the manner of legs supporting a table. In this case, the fuel burns downwards and the food tin or can rests directly upon the fuel container. A third mode of using the heater consists in bending some of the tongues upwards and the others downwards and using the upwardly bent tongues for carrying the food tin or can and the downwardly bent tongues for supporting the fuel container and thereby preventing detrimental heat transmission from the container.

Various constructional forms of the invention are illustrated by way of example in the accompanying drawings, in which:

Fig. 1 shows in top view a heater provided with a supporting ring.

Fig. 2 shows the heater of Fig. 1 set up for use, and also indicates the position of the tin upon the heater.

Fig. 3 shows again the heater illustrated in Fig. 1 set up in a somewhat different manner for use, and a tin placed thereon.

Fig. 4 shows another mode of fixing the supporting ring to the heater in perspective view.

Fig. 5 shows a third mode of fixing the supporting ring to the heater in elevation.

In the construction shown in Figs. 1 to 3, the closing lid *b* of the container *a* held in the rolled-over portion *n* may consist of a combustible material, for instance, celluloid, a metal ring *o* having inwardly directed tongues *p* being also held in position by the rolled or spun-over portion *n*. The metal ring *o* is placed outside, that is, over the lid. If, instead of a combustible lid *b*, a soldered on or tear-off lid is used, the metal ring *o* is placed inside, that is, under the lid. In the latter case, the edge of the container has two spun or rolled folds, that is, one each for holding the metal ring with the tongues, and the lid.

The metal ring *o* with the tongues *p* may be produced by stamping from a circular sheet metal disc and the tongues *p* are used either for setting up the heater or for supporting the preserved food can or tin, or for both purposes. Any number of tongues may be provided and the tongues may differ in shape and size. As shown in Fig. 1, there are two sets of different tongues, each set having three tongues. In use the three longer tongues *p* are bent into a position at right angles to the container, and the container is then set up as shown in Fig. 2. The container *a* may then fit in a corresponding recess of the tin or can *e* or it may support a

vessel having a flat bottom. As shown in Fig. 3, the longer tongues *p* are bent downwards over the beaded edge of the container *a* and serve for supporting the heater, whilst the shorter tongues *p* are bent upwards and support a tin *e* or other vessel. It will be observed that in all cases the tongues have only point contact with the support or vessel supported which reduces losses due to heat transmission by conductivity. It will also be observed that the tongues *p* both in Figs. 2 and 3 provide ample space for access for the air of combustion which, of course, passes between the tongues.

In the construction according to Fig. 4, the ring *o* is flat and is fitted on to the container so that it rests horizontally on an outer rim thereof; in the construction according to Fig. 5, the ring *o* is vertical and is fitted on around the periphery of the fuel container. In both the aforesaid constructions the tongues *p*, which are integral with the ring *o*, may be bent over in the same way as the tongues of the metal ring according to Fig. 1 so as to support the heating body or carry the preserved fruit tin.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A heating device for preserved food or like cans or tins, comprising a solidified fuel container in the form of a flat box with an air-tight lid soldered on or attached by seaming, said box fitting in a corresponding shallow depression at one end of the can or tin after the manner of a push-in lid and being secured to a metal ring having inwardly projecting tongues, which can be bent outwardly in order to form feet for supporting the heating device.

2. A heater for heating preserved food or like cans or tins, according to Claim 1, further characterised in that the lid is made of a flexible material capable of being readily torn off the container, said container being provided with an edge portion rolled over the edge of the lid for holding the lid in position.

3. A heater for heating preserved food or like cans or tins, according to Claim 1, further characterised in that the lid is made of a readily combustible material.

4. A heater for heating preserved food or like cans or tins, according to Claim 1, 2, or 3, further characterised by the provision of a metal ring fixedly connected with the container, said metal ring being provided with inwardly projecting tongues adapted to be bent outwards to form feet supporting a tin or can to be

heated.

5. A heater according to Claim 1 having a metal ring fixedly connected with said container and provided with inwardly projecting tongues to be bent outwards, said container having an edge portion for

seating said lid and said ring.

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S. SOKAL,

1, Great James Street,  
Bedford Row, London, W.C.1,  
Chartered Patent Agent.

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[This Drawing is a reproduction of the Original on a reduced scale.]

512,024 COMPLETE SPECIFICATION

1 SHEET

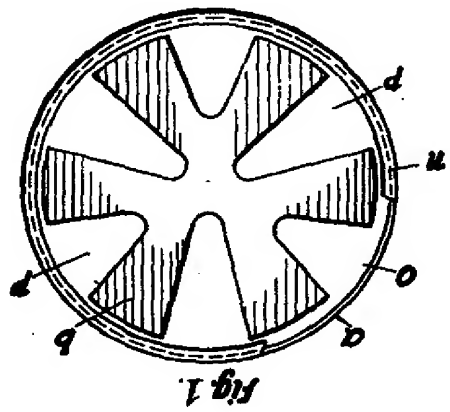


Fig. 1.

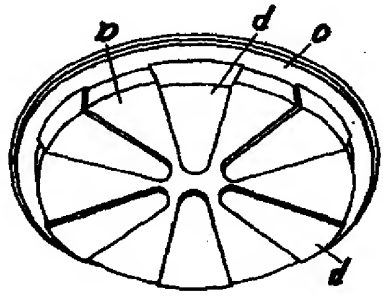


Fig. 4.

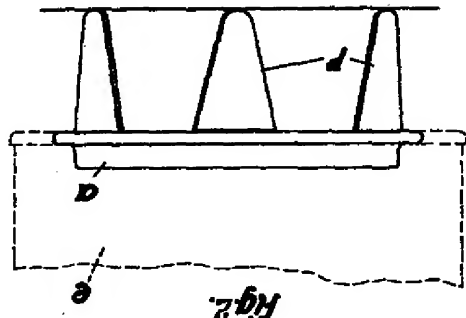


Fig. 2.

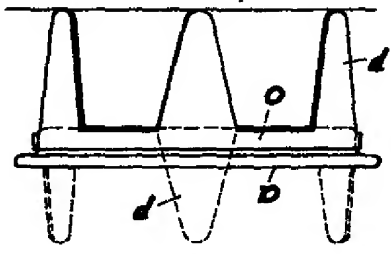


Fig. 5.

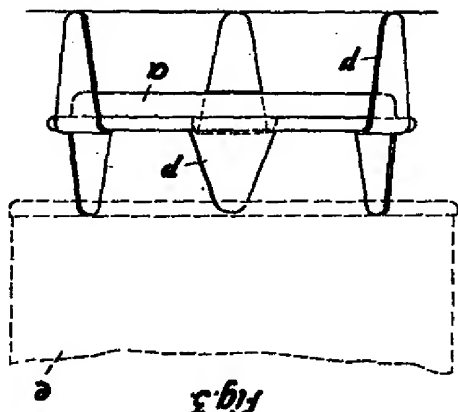


Fig. 3.

Malby & Sons, Photo-Litho.